

IN THE CLAIMS

Please amend claims 3, 4, 5, 9, 11, and 12 as follows.

For the Examiner's convenience, all pending claims are listed below. Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

1. An isolated polypeptide selected from the group consisting of:
 - a) a polypeptide comprising an amino acid sequence of SEQ ID NO:1,
 - b) a polypeptide comprising a naturally occurring amino acid sequence at least 90% identical to an amino acid of SEQ ID NO:1,
 - c) a biologically active fragment of a polypeptide having an amino acid sequence of SEQ ID NO:1, and
 - d) an immunogenic fragment of a polypeptide having an amino acid sequence of SEQ ID NO:1.
2. An isolated polypeptide of claim 1 having an amino acid sequence of SEQ ID NO:1.

3. (Once Amended.) An isolated polynucleotide encoding a polypeptide selected from the group consisting of:

- a) a polypeptide comprising the amino acid sequence of SEQ ID NO:1,
- b) a polypeptide comprising a naturally occurring amino acid sequence at least 90% identical to the amino acid of SEQ ID NO:1,
- c) a biologically active fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, and
- d) an immunogenic fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1.

4. (Once Amended.) An isolated polynucleotide of claim 3 encoding the amino acid sequence of SEQ ID NO:1.

5. (Once Amended.) An isolated polynucleotide of claim 4 having the polynucleotide sequence of SEQ ID NO:2.

6. A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 3.

7. A cell transformed with a recombinant polynucleotide of claim 6.

8. A transgenic organism comprising a recombinant polynucleotide of claim 6.

9. (Once Amended.) A method of producing a polypeptide selected from the group consisting of:

- a) a polypeptide comprising the amino acid sequence of SEQ ID NO:1,
- b) a polypeptide comprising a naturally occurring amino acid sequence having at least 90% sequence identity to the amino acid sequence of SEQ ID NO:1,
- c) a biologically active fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, and
- d) an immunogenic fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, the method comprising:
 - i) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding said polypeptide, and
 - ii) recovering the polypeptide so expressed.

10. An isolated antibody which specifically binds to a polypeptide of claim 1.

11. (Once Amended.) An isolated polynucleotide selected from the group consisting of:

- B4
- a) a polynucleotide comprising the polynucleotide sequence of SEQ ID NO:2,
 - b) a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to the polynucleotide sequence of SEQ ID NO:2,
 - c) a polynucleotide completely complementary to a polynucleotide of a),
 - d) a polynucleotide completely complementary to a polynucleotide of b), and
 - e) an RNA equivalent of a)-d).

12. (Once Amended.) An isolated polynucleotide comprising at least 60 contiguous nucleotides of a polynucleotide of claim 11, wherein said polynucleotide encodes a fragment of SEQ ID NO:1 having serine dehydratase activity.

13. A method of detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:

- a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and
- b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

14. A method of claim 13, wherein the probe comprises at least 60 contiguous nucleotides.

15. A method of detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:

- a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and
 - b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.
16. A composition comprising a polypeptide of claim 1 and a pharmaceutically acceptable excipient.
17. A composition of claim 16, wherein the polypeptide has an amino acid sequence of SEQ ID NO:1.
18. A method for treating a disease or condition associated with decreased expression of functional SDHH, comprising administering to a patient in need of such treatment the composition of claim 16.
27. A method of screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 5, the method comprising:
- a) exposing a sample comprising the target polynucleotide to a compound, under conditions suitable for the expression of the target polynucleotide,
 - b) detecting altered expression of the target polynucleotide, and
 - c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound.
28. A method of assessing toxicity of a test compound, the method comprising:
- a) treating a biological sample containing nucleic acids with the test compound,
 - b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 11 under conditions

whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 11 or fragment thereof,

- c) quantifying the amount of hybridization complex, and
- d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.